



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/709,743

05/26/2004

Bradley James Baxter

49925.830001.US0

3742

26582

7590

12/01/2006

HOLLAND & HART, LLP

P.O BOX 8749

DENVER, CO 80201

EXAMINER

KING, BRADLEY T

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,743	BAXTER, BRADLEY JAMES	
	Examiner	Art Unit	
	Bradley T. King	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of Species I in the reply filed on 9/15/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). All claims are readable on the elected species.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-6, 10-12, 15-16, 20, 22, 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bair et al (US# 6170872).

Bair et al discloses all the limitations of the instant claims including; a first deformation member 3 and 5 having a curved shape with at least first and second opposing radii of curvature in the direction of a deformation axis; and a second deformation member (element near 7 and 12) interconnected with said first deformation member such that said first and second deformation members intersect to define at least first and second deformation cavities between said deformation members, at least one of said deformation cavities operable to close during application of a load in the

Art Unit: 3683

direction of said deformation axis. See figure 4. One side of the first diamond and the opposite side of the second diamond form each deformation member.

Regarding claims 5, 10, 16, 28 and 29, note column 4, lines 19-23 which suggest making the diamonds of different circumference which would require both differing radii of curvature and deformation loads.

Claims 12-15, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 93/23626.

WO 93/23626 discloses all the limitations of the instant claims including; a first deformation member 1; and a second deformation member 1, wherein said first and second deformation members are interconnected such that an intersection of the members creates first and second deformation cavities arranged along a deformation axis, said deformation cavities operable to collapse during energy absorption along said deformation axis.

Regarding claims 13-14, note notches 2.

Regarding claims 20-21, see figure 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9, 17-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair et al (US# 6170872) in view of Almefelt et al (US# 5951045).

Bair et al discloses all the limitations of the instant claims with exception to the disclosure of flanges. Flanged portions are well known and further taught by Almefelt et al for modifying the stiffness and deformation characteristics of impact absorbers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize flanges such as known and further taught by Almefelt et al in the device of Bair to allow a greater degree of control of the deformation and energy absorption characteristics of the device, and further to allow a greater degree of absorption without undue expense and weight.

Regarding claims 8-9, 18-19 and 24-25, note Almefelt teaches varying flange heights and Bair also suggests having differing absorption levels.

Claims 3-4, 13-14, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair et al (US# 6170872) in view of WO 93/23626.

Bair et al disclose all the limitations of the instant claims with exception to the use of the slot interlock arrangement. WO 93/23626 discloses a similar arrangement and further teaches the use of identical elements with interlocking slots as a means of assembling a modular impact absorbing structure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the module interlocking arrangement such as taught by WO 93/23626 for the device of Bair et al as

Art Unit: 3683

an improved means of assembling, thereby reducing manufacturing costs and increasing the flexibility of installation.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamazaki et al, Matsuo et al, Dillard, and Oehm.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571) 272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTK

 11/19/06
BRADLEY KING
PATENT EXAMINER